

REMARKS

Reconsideration of the application in view of the above amendments and following remarks is respectfully requested.

Status of the Claims

Claims 1-4 are pending in the application. Claim 1 is amended, and new claims 5 – 7 are added. No new matter is introduced. Support for the amendments may be found, for example, with reference to Applicants' specification at pages 4 and 5, paragraph [001], pages 16 and 17, paragraphs [0031] and [0032], pages 18 and 19, paragraph [0034], and with reference to Applicants' FIGs. 1, 2 and 4.

Rejections Under 35 U.S.C. §§ 102, 103

Claims 1-2 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,447,071 to Griffin. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Griffin in view of U.S. Patent No. 5,417,476 to Hasegawa. Applicants amend independent claim 1 to further clarify the nature of their invention, and respectfully traverse these rejections.

Amended claim 1 claims:

1. A method of manufacturing a full face vehicle wheel comprising the steps of:
 - providing a wheel rim with one opening brim thereof formed to be a flange portion while the other opening brim is formed to be a peripheral joining end;
 - providing a wheel disk with the periphery thereof formed to be a flange portion for supporting a tire bead sidewise, with said peripheral joining end being configured to be welded to the back surface of said wheel disk,
 - providing the back surface of the wheel disk in advance with an annular joining groove;
 - providing the peripheral joining end of the wheel rim in advance with an inside slope peripheral surface;
 - seating and positioning said peripheral joining end on the bottom surface of the annular joining groove, thereby forming a welding heat confining annular region as a void surrounded by an inside groove wall of the annular joining groove, a [[the]]

bottom surface of the annular joining groove and the inside slope peripheral surface of the peripheral joining end; and

welding the annular joining groove to an edge of the peripheral joining end at an outside surface of the wheel rim, such that weld metal is formed to fill the welding heat confining region and the wheel disk and the wheel rim are joined.

In sharp contrast to amended independent claim 1, Applicants submit that Griffin does not disclose forming a welding heat confining annular region surrounded by an inside groove wall of the annular joining groove, a bottom surface of the annular joining groove and the inside slope peripheral surface of the peripheral joining end such that the said welding heat confining annular region comprises a void and weld metal is formed to fill the welding heat confining region such the a wheel disk and a wheel rim are joined.

The examiner suggests that Griffin's deepwell 38 reads on Applicants' claimed welding heat confining annular region, that Griffin's inner groove surface 42 reads on Applicants' claimed inside groove wall, and that Griffin's groove 36 reads on Applicants' claimed annular joining groove. Applicants respectfully disagree.

As can be seen with reference to FIG. 2 of Griffin, the deepwell 38 is not defined by the groove surface 42 and groove 36, and does not comprises a void per se. While a space 68 is formed between the deepest portion of griffin's groove 36 and the outboard end 52 of the wheel rim 14, the space 68 is not filled by weld metal like Applicants' claimed void, but rather is maintained as an air space after griffin's wheel rim 14 and wheel disc 12 are welded.

As described for example in paragraphs [0010] and [0034] of the specification and with reference to Applicants' FIG. 2, by confining welding heat in the welding heat confining annular region, the inside peripheral surface 13 of the peripheral joining end 11 can be melted and the inside groove wall 26 and bottom surface 27 sufficiently heated to form the weld metal region 30 which encompasses the welding heat confining annular region. This provides the advantage of extending the externally-applied weld into the interior-positioned welding heat confining annular region for increased durability of the weld.

As Griffin does not teach or suggest the above-described features of amended claim 1, Applicants respectfully submit that Griffin fails to anticipate amended independent claim 1 and that amended independent claim 1 therefore stands in condition for allowance. As claims 2 – 4 each

depend from allowable independent claim 1, Applicants submit that dependent claims 2 – 4 are also allowable for at least this reason.

Applicants therefore respectfully request that the rejections of claims 1 - 4 under 35 U.S.C. §§ 102(b), 103(a) be withdrawn.

New Claims

Applicants add new claims 5 – 7. New claim 5 is an independent claim. New claim 6 depends from allowable independent claim 1, and new claim 7 depends from new independent claim 5

New independent claim 5 claims:

5. A method of manufacturing a full face vehicle wheel comprising the steps of:

- providing a wheel rim with one opening brim thereof formed to be a flange portion while the other opening brim is formed to be a peripheral joining end;

- providing a wheel disk with the periphery thereof formed to be a flange portion for supporting a tire bead sidewise, with said peripheral joining end being configured to be welded to the back surface of said wheel disk,

- providing the back surface of the wheel disk in advance with an annular joining groove;

- providing the peripheral joining end of the wheel rim in advance with an inside slope peripheral surface;

- seating and positioning said peripheral joining end on the bottom surface of the annular joining groove, thereby forming a welding heat confining annular region as a void surrounded by an inside groove wall of the annular joining groove, the bottom surface of the annular joining groove and the inside slope peripheral surface of the peripheral joining end, and forming an outside space in the annular groove that opens away from an outside surface of the peripheral joining end; and

- welding the annular joining groove to an edge of the peripheral joining end by flowing metal in a liquid state melted from welding wire to fill said outside space, such that the annular joining groove and the peripheral joining end are melted by the liquid-state metal and the liquid-state metal fills the welding heat confining annular region, so that the wheel disk and the wheel rim are joined.

Like allowable independent claim 1, new independent claim 5 claims a welding heat confining annular region surrounded by an inside groove wall of the annular joining groove, a bottom surface of the annular joining groove and the inside slope peripheral surface of the

peripheral joining end such that the said welding heat confining annular region comprises a void and weld metal is formed to fill the welding heat confining region such the a wheel disk and a wheel rim are joined. Applicants submit therefore that new independent claim 5 is allowable for at least the same reasons argued above in reference to allowable independent claim 1.

In addition, new independent claim 5 claims the steps of forming an outside space in the annular groove that opens away from an outside surface of the peripheral joining end, and flowing metal in a liquid state melted from welding wire to fill the outside space, such that the annular joining groove and the peripheral joining end are melted by the liquid-state metal enabling the liquid-state metal to fill the interior welding heat confining annular region. Applicants submit that Griffin fails to teach or suggest these additional process steps by which welding of an outside space further enables welding of the interior welding heat confining annular region, and that new independent claim 5 is further allowable for this addition reason.

As claim 6 and 7 depend from allowable independent claims 1 and 5, respectively, Applicants submit that dependent claims 6 and 7 are also allowable for at least this reason.

CONCLUSION

Each and every point raised in the Office Action dated September 4, 2008 has been addressed on the basis of the above remarks. In view of the foregoing it is believed that claims 1-7 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue. A prompt and favorable action in that regard is earnestly solicited.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below

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Respectfully submitted,

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